

**Ad hoc
Group on Earth Observations
(GEO)**

DRAFT

**Inaugural Session, 1-2 August 2003
Meeting Summary**

GEO-1 Summary

(draft 26 September 2003)

The First session of the Ad hoc Group on Earth Observations (GEO) was held in the Ronald Reagan Building, Washington, DC on August 1 – 2, 2003. The meeting was called to order by Dr. Kathie Olsen, Associate Director for Science of the White House Office of Science and Technology Policy (OSTP).

Dr. Olsen noted the successful outcome of the Earth Observation Summit in adopting the Declaration and, according to the terms of the Declaration, she invited the Members (See Annex 1 for lists of Members and Participants) to consider candidates for co-chairs for GEO. The list of nominees included Vice Admiral (VADM) Conrad Lautenbacher (Retired), United States; Mr. Achilleas Mitsos, European Commission; and Mr. Akio Yuki, Japan. The motion to elect the three nominees was adopted unanimously and without objection.

The terms also included the prospect of a fourth co-chair from a developing country. The nomination and selection would occur at the first suitable opportunity.

VADM Lautenbacher, Undersecretary of Commerce for Oceans and Atmosphere and Administrator of the National Oceanic and Atmospheric Administration (NOAA, US), assumed the co-chair and invited Mr. Mitsos, Director General of the Directorate General for Research of the European Commission (EC), and Mr. Yuki, Deputy Minister of Education, Culture, Sports, Science, and Technology (MEXT, JAPAN), to join him in chairing the session. Dr. Mitsos expressed his strong support for the work of the GEO and his commitment to the duties of co-chairmanship.

After receiving approval of the agenda (See Annex 2), the Chair called for the Members to consider the Terms of Reference for GEO. The discussion of the terms raised a number of issues, for example: welcoming new members from among those countries not present; the status of ‘observers’ and the need to build on existing efforts; function and operation of the Secretariat; working by consensus; and funding issues. The Chair acknowledged the constructive discussion and proposed to incorporate Member suggestions in a revised version for discussion later in the meeting.

Dr. Ghassem Asrar, Associate Administrator for Earth Science, National Aeronautics and Space Administration (NASA, US), was invited to present a Discussion Paper on the Framework. The paper outlined the fundamental elements of the 10-year plan including the purpose, the benefits, the architecture, the challenges, and the next steps. The paper stimulated considerable discussion. Members identified additional potential benefits, noted further challenges, and provided relevant information on current programs and progress. They were especially interested to ensure that existing systems, both *in situ* and space-based, are effectively incorporated into the future program of Earth observations and that the resulting system or system of systems fully addresses user needs. Members noted that the concept should include the entire scope from requirements to delivery of services, but the initial plans may focus principally on the observational elements. Several members emphasized that building on the work of the Integrated Global

Observing Strategy Partnership (IGOS-P), would be crucial to the development of the 10-year plan.

Mr. Jack Metthey, Director for Space and Transport (EC), and Dr. Jose Achache, Director of Earth Observation Programme, European Space Agency, were invited to make presentations during the luncheon. They discussed the European initiative, Global Monitoring for the Environment and Security (GMES), which is jointly funded through the EC and ESA. The program is intended to deliver policy-relevant services to end users, including urban mapping services, forest and land use change mapping, water pollution risk management, forest fire and flood management, crop monitoring, coastal zone management, and ice monitoring.

The Chair reconvened the meeting and invited consideration of the revised Terms of Reference. After a few comments, Members approved the Terms of Reference (See Annex 3).

Mr. Gregory Withee, Assistant Administrator for Satellite and Information Services, NOAA (US), was invited to present the Draft Framework Outline and lead the discussion. Mr. Withee first noted that the GEO would have to meet an ambitious schedule to meet the stated goals of the Earth Summit and presented a calendar for the next year. (See Annex 4.) Members agreed with the general dates on the schedule and offered some details about the Tokyo ministerial conference in the second quarter of 2004 and the next meeting of GEO proposed for the last quarter of 2003. Japan offered to host a GEO meeting immediately before and in conjunction with the Tokyo ministerial conference. Japan also pointed out that the result of the Tokyo ministerial conference should be reported to the G8 Summit in 2004, which was also agreed by Members. Italy offered to host the second GEO meeting on 28-29 November 2003, immediately following the Fourth Forum on GMES, also being held there..

Mr. Withee led the discussion on the Draft Framework Outline, which provided initial thoughts on the scope, direction, approach, and expectations of a comprehensive, coordinated, and sustained Earth observation system or systems. The discussion was intended to allow the GEO to take first steps in developing a Framework for the Tokyo ministerial conference in the second quarter of 2004 and the Implementation Plan for the ministerial conference in an EU Member state in the fourth quarter of 2004. Members discussed how the work of the various subgroups would relate to the preparation of the Framework Document. Most agreed that the Declaration provided the primary guidance for the Framework. However, Members raised several specific issues about costs and benefits and how the future systems would meet the requirements, both for near-term and long-term purposes. (See Annex 5 for the agreed outline.)

Dr. Tillmann Mohr, Director General of EUMETSAT, stressed the importance of GEO taking full advantage of what has already been achieved, in particular the Theme Reports prepared by high-level international groups under the guidance of the IGOS Partnership.

The Chair invited Dr. Charles Groat, Director, United States Geological Survey and head of the U.S. Delegation, to outline a potential structure for GEO, which included a specific set of subgroups and a secretariat (See Annex 6). After some discussion of the general

and specific needs to develop a Framework and Implementation Plan, GEO Members agreed that subgroups should be formed for: 1) System Architecture; 2) User Requirements/ Outreach; 3) Data Utilization; 4) Capacity Building; and 5) International Cooperation. Dr. Groat invited Members and participants to volunteer to serve on or to lead the various groups. Preliminary membership lists were prepared and circulated (See Annex 7).

Dr. Groat continued to lead the discussion concerning the Secretariat, which was proposed to support GEO and the work of the subgroups. The Members discussed and agreed to a purpose and set of functions to be performed by the Secretariat. The Secretariat is intended to support the work of the GEO under the direction of the Co-Chairs. (See Annex 8 for its functions). Several Members and participants offered to provide assistance (See Annex 9).

The meeting was adjourned at 5:30 p.m.

VADM Lautenbacher, GEO Co-Chair, reconvened the GEO meeting on August 2 and reviewed the outcome of the preceding day. He invited participants to review the list of volunteers for the subgroups and make any additions/corrections. He also reviewed the activities for the Secretariat. He noted that a full set of all documents would be made available and placed on a website by the Secretariat by September 5. (See Annex 10 for a full set of actions.)

The Chair invited presentations on developing country issues. On behalf of Dr. John Briceno, Deputy Prime Minister of Belize, Jorge Cabrera made a presentation on the Central American Commission for the Environment and Development (SICA/CCAD), noting that considerable progress has been made in addressing issues in Meso America. Phase I has been successfully completed and Phase II is now beginning. It is intended to broaden the scope to include Caribbean countries and share methodologies more widely. Mr. Cabrera demonstrated the considerable capacity that the Central American governments have developed to use Earth observations through an interactive 3D visualization of data from NASA research satellites that are being benchmarked for use to support management and policy decisions.

Mr. Daniel Reifsnnyder, U.S. Delegation member and Director of the Office of Global Change at the Department of State, was invited to report on a caucus of developing countries that had assembled to discuss the selection of the fourth GEO co-chair. He reported that South Africa offered to nominate a candidate for the position and that all participating countries in the caucus agreed to support the candidate. Members unanimously agreed to the proposal that South Africa be a co-chair. The South African delegate expressed his gratitude to the Members and agreed to provide the name of a specific individual who would assume the co-chair position.

The Chair invited the potential leaders of the various subgroups to caucus during the intermission. Upon resumption of the meeting, several Members provided refinements to the structure and scope of the various subgroups. It was suggested that a website be used to facilitate communication and cooperation among the subgroups.

The Chair invited the delegates from Gabon to make a presentation on activities in Africa. Dr. Chris Mombo Nzatsi, Director General of the Environment, informed the participants about progress made to gather, distribute, and archive information related to meteorology, and other environmental for the benefit of several West African countries. It is intended that the effort, undertaken in conjunction with the Association pour le Développement de l'Information Environnementale (ADIE), will expand to other African regions.

Following a final round of comments about the future work of the GEO and its subcommittees and the Secretariat, the Chair invited Mr. Yuki to comment. He complimented GEO on the very positive discussions and acknowledged that the efforts would be very helpful in preparing for the second Ministerial meeting in Tokyo. He expressed appreciation to VADM Lautenbacher for chairing the session and to the U.S. Government for the organization and hosting of the meeting.

The Chair concluded the session by thanking all participants for the overwhelmingly positive response. He acknowledged that the expertise and enthusiasm of the group would enable the ambitious schedule to be met. Noting that he was looking forward to the second GEO meeting in Italy, he adjourned the inaugural GEO meeting.

ANNEX 1

Members

Argentina
Australia
Belize
Brazil
Canada
China
Denmark
Egypt
European Commission
France
Gabon
Germany
India
Ireland
Israel
Italy
Japan
Kazakhstan
Mexico
Morocco
Netherlands
New Zealand
Norway
Republic of the Congo
Republic of Korea
Russian Federation
South Africa
Spain
Sweden
Switzerland
Thailand
Ukraine
United Kingdom
United States

Participants

Central American Commission for the Environment and Development (SICA/CCAD)
Committee on Earth Observation Satellites (CEOS)
European Centre for Medium-Range Weather Forecasting (ECMWF)
European Space Agency (ESA)
European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)
Global Climate Observing System (GCOS)
Global Ocean Observing System (GOOS)
Global Terrestrial Observing System (GTOS)
Integrated Global Observing Strategy Partnership (IGOS-P)
Intergovernmental Oceanographic Commission (IOC)
International Agency for the Development of Environmental Information (ADIE)
International Council for Science (ICSU)
International Geosphere-Biosphere Program (IGBP)
International Group of Funding Agencies for Global Change Research (IGFA)
Food and Agriculture Organization of the United Nations (FAO)
United Nations Educational, Scientific and Cultural Organization (UNESCO)
United Nations Environment Programme (UNEP)
United Nations Framework Convention on Climate Change (UNFCCC)
World Bank (IBRD)
World Climate Research Programme (WCRP)
World Meteorological Organization (WMO)

ANNEX 2

Group on Earth Observations (GEO) **Inaugural Meeting**

1-2 August 2003

*The Atrium Ballroom
Ronald Reagan Building and International Trade Center
1300 Pennsylvania Avenue, NW
Washington, DC, USA*

Agenda

Friday, 1 August 2003

9:00 Welcome and Opening Remarks

Chairman *Pro Tem*:

Dr. Olsen, Associate Director for Science, White House Office of Science and
Technology Policy

9:10 Election of the Co-Chairs

Chairman *Pro Tem*: Dr. Olsen

9:20 Administrative Announcements

GEO Co-Chairs

9:25 Adoption of the Agenda

GEO Co-Chairs

9:25 Presentation and Discussion of the Terms of Reference

GEO Co-Chairs

10:15 Break

10:45 Presentation of the Discussion Paper on the Framework

Discussion Leader: Ghassem Asrar, Associate Administrator for Earth Science, National Aeronautic and Space Administration

11:05 Roundtable discussion on GEO Framework

Moderated by the GEO Co-Chairs

12:00 Luncheon Program (Horizon Ballroom)

Advancing Integrated Earth Observations

2:00 Presentation and Discussion of a draft Framework Outline

Discussion Leader: Gregory W. Withee, Assistant Administrator for Satellite and Information Services

3:00 Break

3:30 GEO Structure

Discussion Leader: Dr. Charles “Chip” Groat, Director, U.S. Geological Survey

4:15 Secretariat Discussion

Discussion Leader: Dr. Charles “Chip” Groat, Director, U.S. Geological Survey

5:00 Summary Discussion

GEO Co-Chairs

5:20 Concluding Remarks

GEO Co-Chairs

5:30 Adjourn

Agenda

Saturday, 2 August 2003

*The Atrium Ballroom
Ronald Reagan Building and International Trade Center
1300 Pennsylvania Avenue, NW
Washington, D.C., USA*

9:00 Opening Remarks
GEO Co-Chairs

9:10 Priorities and Contributions
Discussion Leader: GEO Co-Chairs

10:00 Break

10:30 Strategy for Developing Country Focus

11:30 Summary Session and Conclusions
GEO Co-Chairs

12:00 Adjourn

ANNEX 3

Final
2 August 2003

Earth Observation Summit *Ad hoc* Group on Earth Observations (GEO)

Terms of Reference

Recalling the Earth Observation Summit Declaration of 31 July 2003, the participating governmental entities (collectively referred to as the “Members”) set forth the following, legally non-binding Terms of Reference for the *ad hoc* Group on Earth Observations (GEO).

1. Purpose and Functions of the GEO

The GEO will seek in its work to:

- 1.1 improve coordination of strategies and systems for observations of the Earth and identify measures to minimize data gaps, with a view to moving toward a comprehensive, coordinated, and sustained Earth observation system or systems;
- 1.2 coordinate an effort to involve and assist developing countries in improving and sustaining their contributions to observing systems, as well as their access to and effective utilization of observations, data and products, and the related technologies by addressing capacity-building needs related to Earth observations;
- 1.3 exchange observations recorded from *in situ*, aircraft, and satellite networks, dedicated to the purposes of this Declaration, in a full and open manner with minimum time delay and minimum cost, recognizing relevant international instruments and national policies and legislation;
- 1.4 prepare a 10-year Implementation Plan, taking into account existing activities and building on existing systems and initiatives, with the Framework being available by the Tokyo ministerial conference on Earth observations to be held during the second quarter of 2004, and the Plan being available by the ministerial conference to be hosted by the European Union during the fourth quarter of 2004;
- 1.5 define a process to periodically evaluate and revise the 10-year Implementation Plan; and
- 1.6 conduct such other activities, consistent with the Declaration, as the Members may deem necessary.

2.0 Organization of the GEO

- 2.1 The GEO welcomes and is open to all interested governments and the European Commission. Each Member will name one representative and one alternate. Each Member will determine the terms of its participation in the activities of the GEO. The list of current Members is contained in Annex I to these Terms of Reference, and will be updated at each meeting.
- 2.2 The GEO may also invite the participation of organizations, international bodies, and individual experts. The list of current participants is contained in Annex II to these Terms of Reference, and will be updated at each meeting.
- 2.3 The GEO will meet at such times and places as determined by its Members.
- 2.4 At its inaugural meeting, the GEO will elect four co-chairs from among its Members, at least one of which will be from a developing country Member, to serve until 31 December 2004.
- 2.5 The GEO will work by consensus of its Members.
- 2.6 The GEO may establish subgroups, as appropriate.
- 2.7 Administrative Secretariat support to the GEO will be provided by the United States, working with staff designated and supported by other Members and participants, as deemed necessary and appropriate by the co-chairs.

3.0 Funding

Unless otherwise agreed, any costs arising from activities under these Terms of Reference will be borne by the Member or participant that incurs them, and will be subject to the availability of funds, personnel, and other resources.

4.0 Duration

- 4.1 All activities under these Terms of Reference will commence upon adoption and will continue until 31 December 2004, unless extended or terminated.
- 4.2 The terms of this document may be modified at any time by written agreement of the Members.

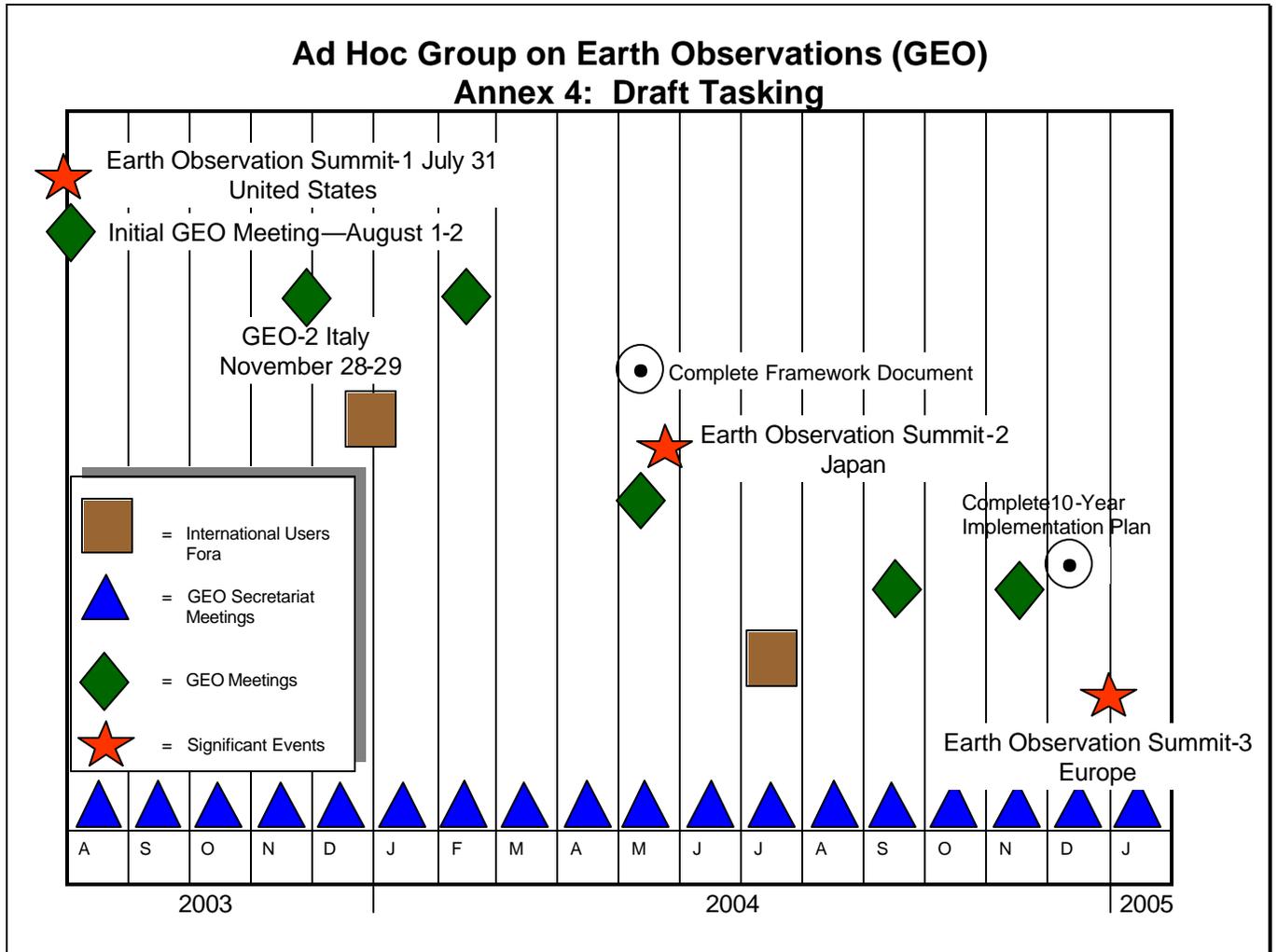
GEO Terms of Reference
Annex I

Argentina
Australia
Belize
Brazil
Canada
China
Denmark
Egypt
European Commission
France
Gabon
Germany
India
Ireland
Israel
Italy
Japan
Kazakhstan
Mexico
Morocco
Netherlands
New Zealand
Norway
Republic of the Congo
Republic of Korea
Russian Federation
South Africa
Spain
Sweden
Switzerland
Thailand
Ukraine
United Kingdom
United States

GEO Terms of Reference
Annex II

Central American Commission for the Environment and Development (SICA/CCAD)
Committee on Earth Observation Satellites (CEOS)
European Centre for Medium-Range Weather Forecasting (ECMWF)
European Space Agency (ESA)
European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)
Global Climate Observing System (GCOS)
Global Ocean Observing System (GOOS)
Global Terrestrial Observing System (GTOS)
Integrated Global Observing Strategy Partnership (IGOS-P)
Intergovernmental Oceanographic Commission (IOC)
International Agency for the Development of Environmental Information (ADIE)
International Council for Science (ICSU)
International Geosphere-Biosphere Program (IGBP)
International Group of Funding Agencies for Global Change Research (IGFA)
Food and Agriculture Organization of the United Nations (FAO)
United Nations Educational, Scientific and Cultural Organization (UNESCO)
United Nations Environment Programme (UNEP)
United Nations Framework Convention on Climate Change (UNFCCC)
World Bank (IBRD)
World Climate Research Programme (WCRP)
World Meteorological Organization (WMO)

ANNEX 4 Draft 2003-2004 GEO Calendar/Tasking Chart

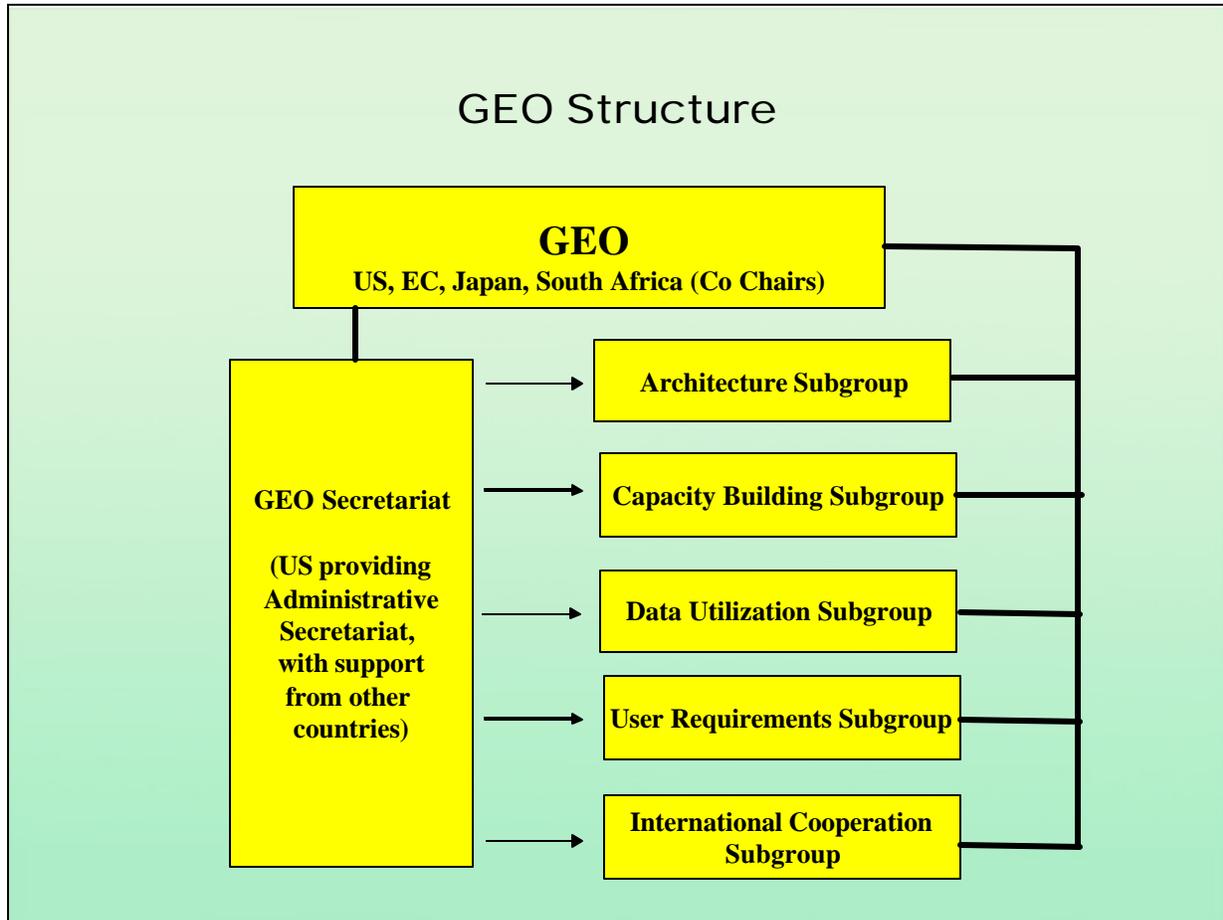


ANNEX 5

Agreed Framework Outline

- I. Introduction
- II. Purpose
- III. Benefits/Requirements
- IV. Elements of Earth Observation “System”
- V. Architecture for the Future
- VI. Capacity Building
- VII. International Cooperation
- VIII. Challenges

ANNEX 6



ANNEX 7

Subgroup Membership Lists as of 2 August 2003

**Indicates co-chair*

***Indicates tentative participation*

Architecture

Japan*
France*
WMO*
Argentina
Australia
Canada
CEOS
China
EC
ESA
EUMETSAT
Germany
IGOS
IOC/GOOS
Israel
Italy
Norway
Russia
South Africa
Spain
Switzerland
USA
UK

Capacity Building

Argentina*
Belize/CCAD*
Brazil*
Israel*
Republic of the Congo*
USA*
Canada
CEOS
EC
Egypt
IGOS
IOC/GOOS
India
Italy
Japan
New Zealand
Norway
South Africa
Spain
Thailand
UNESCO
WMO

Data Utilization

Brazil*
Canada *
ECMWF*
Argentina
Australia
CEOS
China
EC
ESA
Egypt
France
GCOS
Germany
IGOS
IOC/GOOS
Israel
Italy
Japan
Norway
Russia
South Africa
Spain
Thailand
USA
UK
WCRP
WMO

International Cooperation

Australia*
IOC*
USA*
Argentina
Brazil**
Canada
CEOS
EC
ESA
EUMETSAT
IGOS
IOC/GOOS
Israel
Italy
Japan
Russia
South Africa
Spain
Switzerland
UNESCO
WMO

User Requirements & Outreach

Canada*
Italy*
UK*
Argentina
Australia
CEOS

EC
ECMWF
Egypt**
ESA
GCOS
Germany

IGBP
IGOS
India
IOC/GOOS
Japan
Norway

South Africa
Spain
UNESCO
USA
WCRP
WMO

ANNEX 8

Secretariat

- Purpose
 - Support the work of GEO under the direction of the Co-Chairs
- Notional functions
 - Organizing and supporting GEO meetings
 - Establishing and maintaining website, e-mail, and associated communication mechanisms
 - Tracking and coordinating work among GEO and its subgroups
 - Provide for technical expertise for the subgroups
 - Draft for the subgroups
 - Introduction and Purpose
 - Annotated Framework Document Outline

ANNEX 9

GEO Secretariat Membership

**indicates co-chair*

EC*

Japan*

South Africa*

USA*

Canada

CEOS

ESA

EUMETSAT

France

IGOS

IOC

Italy

WMO

ANNEX 10

Post GEO-1 ACTIONS

1. Identify subgroup representatives to Richard.Ohlemacher@noaa.gov by August 21, 2003.
2. Identify Secretariat representatives to Richard.Ohlemacher@noaa.gov by August 21, 2003.
3. Secretariat to issue draft terms of reference for each subgroup to GEO members and participants by September 5, 2003.
4. Secretariat begins planning for GEO-2 by September 5, 2003.
5. Members provide response on draft terms of reference by September 19, 2003.
6. Secretariat provides annotated draft Framework outline, including Subgroup assignments, to GEO members and participants by September 19, 2003.
7. Subgroups begin work no later than October 1, 2003.
8. Secretariat completes draft introduction and purpose sections of Framework by October 31, 2003.
9. Draft chapters due to Secretariat from Subgroups by October 31, 2003.
10. Secretariat to compile and distribute to members and participants the chapters for first draft framework document by November 14, 2003.
11. GEO-2 meeting 28-29 November 2003, Italy.
12. Secretariat prepares website and draft briefing package on GEO by October 14, 2003.